





Geriatric GI: Tread Carefully
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Conflict of Interest Disclosure
I have no conflicts and nothing to disclose

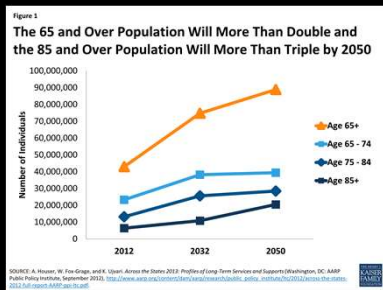
Objectives:
To understand the unique approach and special touch that is needed when caring for the elderly with

- Dysphagia
- Colonoscopic Evaluations
- Constipation (**Constipation Conundrums**)
- Fecal incontinence

“If you don’t know where you’re going, you might not get there”

Yogi Berra

Here is what we can expect



Molly

- Is an 81 y.o. healthy APRN who is reporting new onset of constipation
- Her screening colonoscopy was 3 years ago
- She has no “alarm” symptoms (rectal bleeding, anemia, fever, weight loss)
- No FH colon Ca
- What should we do now?

Which of the following may cause Molly's constipation?

1. Inactivity
2. Poor fluids intake
3. Poor dentition
4. Meds
5. All the above

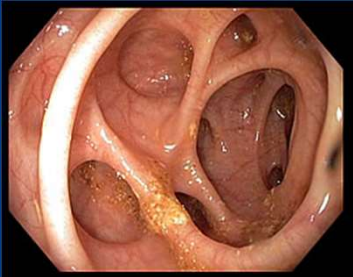
What is the Patient's Definition of Constipation?

All of the following are risk factors for constipation EXCEPT:

1. Hyperparathyroidism
2. Multiple sclerosis
3. Congestive heart failure
4. Diabetes mellitus

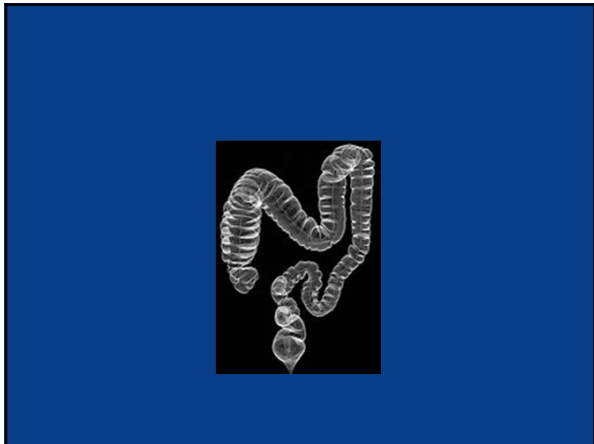
Sam

- Is an 89 y o with diarrhea
- 10 lb wt loss in 2 months
- H/H 11/34 Fe 35 (low)
- The colonoscope could only reach the sigmoid



What test should we consider next?

1. Air contrast barium enema
2. CT or MRI virtual colonoscopy
3. Capsule study of the colon
4. None of the above; we have enough info



Myra

- Is a 68 y.o. P.A. with lifelong constipation that has been evaluated and treated elsewhere
- Colonoscopy 3 years ago normal
- Meds: Fish Oil 1000mg bid
Baby ASA 81 mg qd
Crestor 20 mg qd
FeSO4 325 mg tid
- PE unremarkable
- Bloods normal

Any suggestions before proceeding further?

All of the following can cause constipation, EXCEPT:

1. Cholestyramine
2. Anticholinergics like Bentyl
3. Erythromycin
4. Calcium channel blockers

What is the best screening test for colon cancer?

1. Virtual Colonoscopy
2. FIT Test
3. "Cologuard" Test
4. Colonoscopy

Colon Ca Screening Guidelines

- Tier 1: Colonoscopy every 10 years OR Annual FIT test
- Tier 2: CT Colonography every 5 years OR "Cologuard" every 3 years OR Flexible sigmoidoscopy every 5 – 10 years
- Tier 3: Septin 7 blood test **NOT RECOMMENDED**

Rex DK et al
Colorectal cancer screening: recommendations for physicians and patients from the US Multi Society Task Force on Colorectal Cancer
Am J Gastroenterol 2017;112:1016

When should we stop routine screening colonoscopies?

1. Age 70
2. Age 75
3. Age 80

May FP and Gupta S
When should screening stop for elderly individuals at average and increased risk for colorectal cancer
Clinical Gastroenterology and Hepatology 2018;16:178

Online Guidance Tools

- ePrognosis
- Screeningdecisions.com
- Charlson Comorbidity Index (CCI)

What are the Pros and Cons of "FIT" and "Cologuard" Testing?

Fecal Immunochemical Test (FIT)

- Pros
 - Sensitivity for Ca 79%
 - Specificity for Ca 94%
 - Inexpensive
- Cons
 - Not useful with active rectal bleeding

Lee, JC et al
Accuracy of fecal immunochemical tests for colorectal cancer: systematic review and meta-analysis
Ann Int Med 2014;160:171

Multiplex Stool DNA (Cologuard)

- Pros
 - Sensitivity for Ca 92%
 - Specificity for Ca 86.6%
- Cons
 - Expensive
 - False positives in elderly
 - Not useful with active rectal bleeding

Imperiale, T et al
MultiTarget stool dna testing for colorectal cancer screening
NEJM 2014;370:1287

Cologuard False Positive Tests



10% of the originally studied cohort were false Positives



False positives occur because of DNA methylation in older patients

Your intern asks you

- Does she need to stop aspirin or warfarin in a patient prior to a FIT test?

Mike

- Age 92 has a rectal bleed and refuses a colonoscopy
- Might a FIT test or "Cologuard" be a reasonable alternative?

Margaret

- Is an 85 y o who comes to see you for rectal bleeding
- She has CHF and an EF of 28%
- On the following meds:
 - Carvedilol 3.125 mg bid
 - Spironolactone 50 mg bid
 - Digoxin .125 mg QD

Margaret

- PE: Ill female in NAD
- BP 100/84 p 96
- Rales
- 4+ pitting edema
- H/H 7.1/20

- What would you recommend?

Rick

- Age 68 had a normal colonoscopy last year for constipation
- 2 weeks ago Rick developed rectal bleeding
- You got especially concerned with a Hgb of 9!
- You ordered a repeat colonoscopy and the GI found a massive sigmoid Ca!

- What's happening?

What are Alarm Symptoms and Why Are They Important?

- Rectal bleeding

- Fever

- Anemia

- Weight loss

What is Interval Cancer?



Why does interval cancer occur?

- Poor prep (standard of care is split dose)
- Some patients need 2 or 3 days of prep
- Lack of time examining the right colon
- Incomplete removal of a polyp
- Missed lesions

Patel S and Ahnen D
Prevention of interval colorectal cancers: what every clinician needs to know
Clinical Gastroenterology 2014;12:7


VERY RARELY
De novo colon cancer occurring without polyp sequence

Take Home Message

- Colonoscopy does not prevent ALL colon cancers
- Read the report carefully
- Know that the goal of colonoscopists is to achieve
30% polyp detection in males
20% polyp detection in females

Joyce

- Is a 75 y o with a lifetime of severe constipation
- She has abused Senna (Ex lax) and Cascara for years
- Her constipation is getting worse
- Here is an image of her colon:



- How should we treat?

Linda

- Is a 65 y o group home patient who is sent to see you for diarrhea
- You do a rectal exam and find a large amount of firm stool in the rectum
- What's happening?

Fecal Overflow Incontinence

- Firm stools cause an inhibition of rectal tone
- Other causes: Not enough fiber
Inadequate fluids
Immobility

UGI Track

Rima

- Is a 79 y o who has a follow up appointment with you for epigastric discomfort
- She had 2 hospitalizations for bleeding duodenal ulcers 6 mo and 12 mo ago
- Using OTC NSAID for her arthritis

Rima

PE: VS stable

Abd: soft, non tender, heme –

Labs: H/H 13/39

You tell her to stop the NSAID

You prescribe a PPI

Does Rima need an endoscopy?



Yes



No

If you don't order an endoscopy;
which H pylori test should you
consider?

1. Serum
2. Stool
3. Breath

Which H pylori test to choose?

- Breath test and stool test both have over 95% sensitivity and specificity
- Serological tests may result in false + results

Mallertheiner P et al
Management of Helicobacter pylori infection – the Maastricht IV Florence consensus report
Gut 2012;61:646

What are some PPI risks?

Risks (in red)



Decreased Magnesium
Cl difficile

MI
Stroke
Alzheimer's
Renal Failure

Osteoporosis
Interaction with Clopidogrel (Plavix)

Cook D and Guyatt G
Prophylaxis against upper gastrointestinal bleeding in hospitalized patients
NEJM 2018;378:2506

What does the PDR still say about PPI use?



PPI USE MAY DIMINISH THE THERAPEUTIC EFFECT OF CLOPIDOGREL

INCREASED INCIDENCE OF OSTEOPOROSIS RELATED BONE FRACTURES WITH LONG TERM PPI USE

Clopidogrel

- Concern dates to 2009 with in vitro and retrospective studies

Data on Clopidogrel/PPI




- Large meta-analysis (16 studies, 10 abstracts)
- MI, stroke, stent occlusion, death (primary outcome)
- Repeat hospitalization, revascularization procedures (secondary outcome)

Data

- Zero risk of adverse outcome

Gerson LB et al
Lack of significant interaction between clopidogrel and proton pump inhibitor therapy: meta-analysis of existing literature
Digestive Dis and Sci 2012;57:1304

Bone Fractures With PPI Use

-  Original data was:
-  Retrospective
-  Association, not causality

Canadian Study

- Population based sample of femoral, hip and lumbar spine at baseline, 5 and 10 years
- 8430 subjects at baseline
- 4510 at 10 years
- PPI vs no PPI
- No change in bone mineral density with continuous use of PPI


Targownik, LE et al
The relationship between proton pump inhibitor use and longitudinal change in bone mineral density: a population based study from the Canadian Multicenter Osteoporosis Study (CaMos)
Am J Gastro 2012;107:1361

PPI Overuse

- PPI prophylaxis without indications in 60% of patients transferred out of the ICU
- PPI prophylaxis without indication for 35% of patients discharged home

Farrell CP et al
Overuse of stress ulcer prophylaxis in the critical care setting and beyond
J Crit Care 2010;25:214

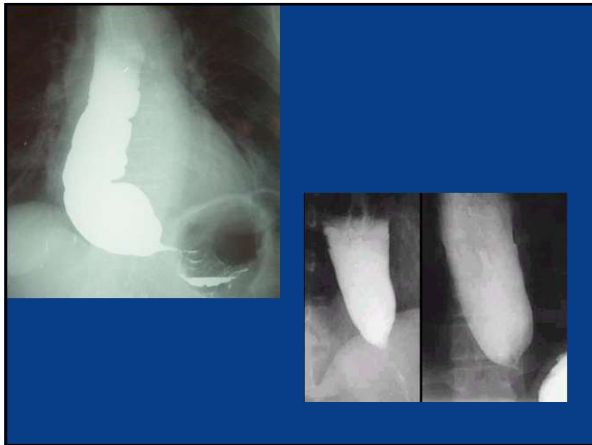
Farley KJ et al
Inappropriate continuation of stress ulcer prophylaxis beyond the intensive care setting
Crit Care Resusc 2013;15:147



DYSPHAGIA

Meredith

- Is a 92 y o who lives in an area nursing home
- She has had dysphagia and has lost 15 lb in the past 2 weeks
- Her doctor ordered an esophagram



What are the possibilities?

1. Achalasia
2. Gastric cancer just inside the gastro esophageal junction
3. Both of the above

If Meredith has Achalasia, what is the safest next step?

1. Esophageal dilation
2. Botox injection
3. Surgical myotomy

Causes of Dysphagia

- Hiatal hernias: sliding
para esophageal
- Diffuse esophageal spasms
- Achalasia
- Zenker's Diverticulum
- Stricture

Donna

- Age 82 has had fecal incontinence for 10 years
- Hx significant for hemorrhoidectomy 12 years ago
- Meds: Lansoprazole 30 mg daily
- PE: unremarkable

- What do you suggest next?

Treatment of Fecal Incontinence:
Step 1

- Are meds contributing?
- Dietary manipulation:
 - Eliminate caffeine
 - Eliminate sorbitol/fructose
- AND
- Titrate **Loperamide**

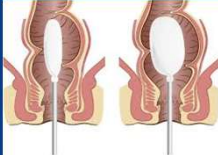
Bharucha AE et al
Surgical interventions and the use of device-aided therapy for the treatment of fecal incontinence and defecatory disorders
Clinical Gastroenterology and Hepatology 2017;15:1844

Treatment of Fecal Incontinence:
Step 2

- Fiber supplement
- Anticholinergic
- Cholestyramine

Treatment of Fecal Incontinence:
Step 3

- Bowel retraining
- Anorectal manometry/biofeedback



The diagram shows two cross-sectional views of the human rectum and sigmoid colon. In the left view, a catheter is inserted into the rectum, and a sensor is placed in the rectal wall. In the right view, a similar setup is shown with a different sensor placement. This illustrates the use of anorectal manometry or biofeedback for treatment.

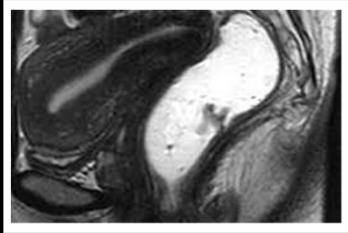
Treatment of Fecal Incontinence: Step 4

- Injection of anal bulking agents
- Anal sphincteroplasty

Specialized, Advanced Testing for Selected Patients With Constipation Unresponsive to Standard Care

Colon Transit Study





Defecography

Anorectal Manometry and Biofeedback

Robert

- Age 82 was admitted for CHF
- Now with a 2 day hx of severe mid abdominal pain
- Hx of post prandial abd pain for 6 months
- No rectal bleeding
- Hx of: MI 3 months ago
- smoking 2 ppd for 45 years
- hyperlipidemia 25 yrs

Robert

- Meds: Rosuvastatin 40 mg daily
ASA 81 mg daily
Lisinopril 20 mg daily

Robert

- PE
- WDNW male in NAD
- BP 160/94 p 100 rr 16 t 99
- Lungs: rales at bases
- Cor: nl
- Abd: soft, **non** tender. Abdominal bruit present
- Labs: CBC nl; LDL 284 mg/dL
No evidence of an acute MI
CXR: CHF

What test might you consider next for Robert?

1. Flat and upright of abdomen
2. Endoscopy
3. Colonoscopy
4. MRI
5. Duplex ultrasound of mesenteric vessels

What is the most likely diagnosis?

1. Colonic ischemia
2. Mesenteric ischemia
3. Dissecting aortic aneurysm
4. Diverticulitis

What is Mesenteric Ischemia (Intestinal Angina)?

- Acute or chronic poor circulation to the small intestine that causes abdominal pain
- Acute mesenteric ischemia can be life threatening
- Risk factors: CHF
 - A fib
 - Renal failure
 - Previous MI

Treatment of Mesenteric Ischemia

- Anticoagulation
- Antibiotics
- PPIs
- Revascularization: Open
 - Stenting

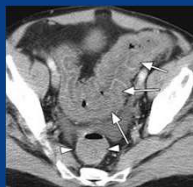
Martha

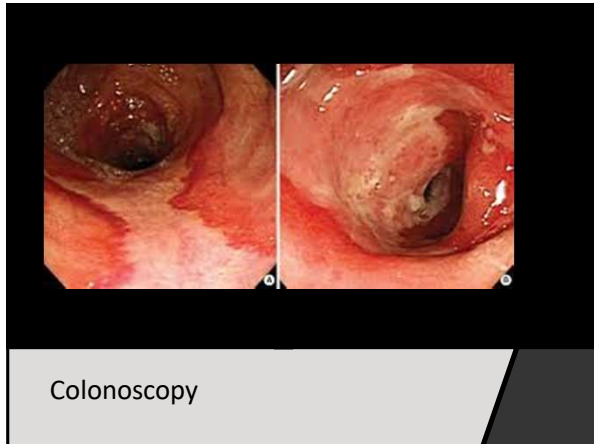
- Is a 74 y o patient with a 3 day history of N/V and profuse blood tinged diarrhea
- Also diffuse abdominal pain
- Hx of thrombocytosis

Exam

- WDWN pt profoundly dehydrated
- BP 80/40 p 120 t 100.6
- Abd significant LLQ tenderness, but no rebound or mass
- Bright red blood on rectal exam
- Labs WBC 25,000 shift to left
- Hct 41 BUN 70 Cr 4.2

CT Scan





The most likely diagnosis is:

1. Crohn's
2. Ulcerative Colitis
3. Diverticulitis
4. Colonic Ischemia

Treatment of Colonic Ischemia

- Gut rest
- IV fluids
- Give it time
- Continue to monitor for worsening

Difference Between Mesenteric Ischemia and Colonic Ischemia

Mesenteric Ischemia

- Affects circulation to **small intestine**
- Rarely rectal bleeding
- Usually celiac or superior mesenteric arteries
- CT/MR angiography helpful
- Colonoscopy **not** helpful

Colonic Ischemia

- **Colonic** circulation
- Rectal bleeding
- Occlusive or non occlusive (superior and inferior mesenteric arteries)
- MR angiography not helpful
- Colonoscopy helpful in diagnosis

Summary

- Routine screening colonoscopies in patients over 70 should be directly related to their future lifespan
- FIT tests have fewer false positives than "Cologuard"
- Ischemic Colitis is associated with rectal bleeding/ Rectal bleeding is very unusual in Mesenteric Ischemia

Thanks
